

STIC-Biotech/ChemLib

69675

From: Saoud, Christine
Sent: Wednesday, June 26, 2002 10:32 AM
To: STIC-Biotech/ChemLib
Subject: sequence search - 09/781,077

Please search SEQ ID NO:2 in the commercial and patent databases. Please also do a separate search of residues 26-52 of SEQ ID NO:2 and residues 119-142 of SEQ ID NO:2 in the same databases.

Thank you,

Christine Saoud
A.U. 1647
CM1 - 10E03
305-7519
mailbox 10C01

Edward Hart
Technical Info. Specialist
STIC/Biotech
CMI 6B02 Tel: 305-9203

Searcher: _____
Phone: _____
Location: _____
Date Picked Up: 6/27/02
Date Completed: 6/28/02
Searcher Prep/Review: _____
Clerical: _____
Online time: _____

TYPE OF SEARCH:
NA Sequences: _____
AA Sequences: 3
Structures: _____
Bibliographic: _____
Litigation: _____
Full text: _____
Patent Family: _____
Other: _____

VENDOR/COST(where applic.)
STN: _____
DIALOG: _____
Questel/Orbit: _____
DRLink: _____
Lexis/Nexis: _____
Sequence Sys.: QD
WWW/Internet: _____
Other (specify): _____

Pending Nucleic Acid and/or Pending Amino Acid database searches now generate two sets of results. These databases were split into two parts to reduce the time needed to update the databases daily. The split freed up more machine time for processing searches.

Searches run against the Nucleic Acid Pending database produce two sets of results, with the extensions, **.rnpn** and **.rnpn**

Searches run against the Amino Acid Pending database produce two sets of results, with the extensions, **.rapn** and **.rapn**

The Pending database search results should not be left in the case because they contain data that is confidential.

WEST Search History

DATE: Wednesday, September 04, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ</i>			
L1	zins4	3	L1

END OF SEARCH HISTORY

WEST

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Search Results - Record(s) 1 through 3 of 3 returned.☐ 1. Document ID: US 20020012967 A1

L1: Entry 1 of 3

File: PGPB

Jan 31, 2002

PGPUB-DOCUMENT-NUMBER: 20020012967

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020012967 A1

TITLE: Insulin homolog polypeptide zins4

PUBLICATION-DATE: January 31, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Holloway, James L.	Seattle	WA	US	
Lok, Si	Seattle	WA	US	
Jaspers, Stephen R.	Edmonds	WA	US	

US-CL-CURRENT: 435/69.4; 435/325, 530/399, 536/23.5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMIC
Draw	Desc	Image									

☐ 2. Document ID: US 20020012967 A1

L1: Entry 2 of 3

File: DWPI

Jan 31, 2002

DERWENT-ACC-NO: 2002-205099

DERWENT-WEEK: 200226

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TITLE: New insulin homolog polypeptide zins4, useful for treating or preventing reproductive, prostate, heart, kidney or other disorders, particularly for modulating ovarian cycle, blood pressure, muscle tension or osmotic balance

INVENTOR: HOLLOWAY, J L; JASPERS, S R ; LOK, S

PRIORITY-DATA: 2000US-188544P (March 10, 2000), 2001US-0781077 (February 9, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20020012967 A1	January 31, 2002		032	C12P021/02

INT-CL (IPC): C07 H 21/04; C07 K 14/575; C12 N 5/06; C12 P 21/02

ABSTRACTED-PUB-NO: US20020012967A

BASIC-ABSTRACT:

NOVELTY - An isolated polypeptide, which comprises a sequence having 142 amino acids

(I) fully defined in the specification or a fragment of (I), is new.

DETAILED DESCRIPTION - An isolated polypeptide, which comprises a sequence having 142 amino acids (I) fully defined in the specification or a fragment of (I) comprising amino acid residues 26-52, 26-53, 26-54, 55-114, 55-115, 55-116, 55-117, 55-118, 119-142, 26-114, 26-118, 55-142, 1-25, 1-52, 26-54, 1-118 or 26-142 of (I), where the isolated protein may comprise:

(a) a B chain comprising amino acid residues 26-52 of (I); and

(b) an A chain comprising amino acid residues 119-142 of (I), where the B chain and A chain are joined by inter- and intra-chain disulfide bonds, is new.

INDEPENDENT CLAIMS are also included for the following:

(1) an isolated polynucleotide, which encodes the polypeptide above, comprising 429 base pairs (bp) (II) fully defined in the specification or a fragment of (II);

(2) an expression vector comprising a transcription promoter, the DNA molecule that encodes the polypeptide and a transcription terminator;

(3) a cultured cell into which has been introduced the expression vector, where the cultured cell expresses the polypeptide encoded by the polynucleotide segment;

(4) producing the protein; and

(5) an antibody or antibody fragment that specifically binds the polypeptide.

ACTIVITY - Antiinfertility; cardiant; renal active; hypotensive; hypertensive; inotropic; tocolytic. No details of tests are given.

MECHANISM OF ACTION - Protein therapy; gene therapy.

USE - The proteins are useful for treating or preventing reproductive, prostate, heart, kidney or other disorders. The polypeptides are particularly useful for modulating steroidogenesis, both in vivo or in vitro, e.g. modulating ovarian cycle such as oocyte maturation, ovarian cell-cell interactions, follicular development and rupture, luteal function, promoting uterine implantation of fertilized oocytes, as well as modulating activities associated with pregnancy (e.g. gestation and labor). The polypeptide is also useful for enhancing fertilization during assisted reproduction (e.g. artificial insemination) in humans and animals. The proteins may also be used in modulating blood pressure, muscle tension or osmotic balance. The polynucleotides may also be used for identifying a region of the genome associated with human disease states. The nucleic acid molecules may also be used to detect the expression of a zins4 gene in a biological sample.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

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☐ 3. Document ID: AU 200136817 A WO 200168862 A1

L1: Entry 3 of 3

File: DWPI

Sep 24, 2001

DERWENT-ACC-NO: 2001-582454

DERWENT-WEEK: 200208

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TITLE: New insulin homolog polypeptide having homology to relaxin family, designated zins4 and zins4 polynucleotide, useful for diagnosing, preventing, treating reproductive, prostate, heart and kidney disorders

INVENTOR: HOLLOWAY, J L; JASPERS, S R ; LOK, S

PRIORITY-DATA: 2000US-0523346 (March 10, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
AU 200136817 A	September 24, 2001		000	C12N015/17
WO 200168862 A1	September 20, 2001	E	079	C12N015/17

INT-CL (IPC): C07 K 14/62; C07 K 14/64; C07 K 16/26; C12 N 15/17; C12 P 21/02

ABSTRACTED-PUB-NO: WO 200168862A
BASIC-ABSTRACT:

NOVELTY - An isolated insulin homolog polypeptide having homology to relaxin family, designated as zins4, comprising a sequence (S1) of 142 amino acids fully defined in the specification, where Zins4 polypeptide comprises a B chain and A chain having amino acid residues 26-52 and 119-142 of (S1), respectively, which are joined by inter- and intra-chain disulfide bonds, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (1) an isolated polypeptide consisting of the sequence of amino acid residues 26-52, 26-53, 26-54, 55-114, 55-115, 55-116, 55-117, 55-118, 119-142, 26-114, 26-118, 55-142, 1-25, 1-52, 26-54 or 1-118 of S1;
- (2) an isolated polynucleotide molecule (I) that encodes zins4 polypeptide;
- (3) an isolated polynucleotide molecule comprising a sequence (S2) of 429 base pairs (bp) fully defined in the specification or a polynucleotide comprising nucleotides 74-426, 74-156, 74-159, 74-162, 163-342, 163-345, 163-348, 163-351, 163-354, 355-426, 1-73, 1-162, 1-342, 74-342, 74-345, 74-348, 74-351 or 74-354 of (S2);
- (4) an expression vector (II) comprising transcription promoter, a DNA molecule that encodes zins4 polypeptide and a transcription terminator operably linked to each other;
- (5) a cultured cell (III) which expresses zins4 polypeptide, comprising (II);
- (6) producing zins4 polypeptide; and
- (7) an antibody (IV) or its fragment that specifically binds to zins4 polypeptide.

ACTIVITY - Cytostatic; antifertility; vasotropic. No supporting data is given.

MECHANISM OF ACTION - Gene therapy; modulator of oocyte or ovarian development.

USE - Zins4 proteins are useful in applications for enhancing fertilization during assisted reproduction in humans and in animals and in therapies for treating reproductive disorders. Zins4 protein is useful in treating reproductive, prostate, heart, kidney or other disorders, to identify cells, tissues or cell lines which respond to zins4-stimulated pathway, to identify inhibitors of its activity and to prepare antibodies that bind to zins4 epitopes, peptides or polypeptides. Zins4 polypeptides, (I), (IV) and modulators of the polypeptide are useful in treating disorders associated with gonadal development, pregnancy, pubertal changes, menopause, ovarian cancer, prostate, testicular cancer, fertility, ovarian function, polycystic ovarian syndrome and other reproductive functions. The molecules are useful for modulating or to treat or prevent development of pathological conditions in ovary. Ovulation can be suppressed or controlled for use in birth control by the molecules. The molecules are also useful for treating dysfunction associated with contractile tissues or to suppress or enhance contractility in vivo, treating cardiovascular disease, infertility, in vitro fertilization, birth control, treating impotence or other male reproductive dysfunction, inducing birth, for promoting growth, differentiation, development and/or maturation of ovarian cells, myocytes, endothelial cells, osteoblasts in culture and in the study of the ovarian cycle,

reproductive function, ovarian cell-cell interactions and fertilization. Detection of zins4 polypeptides in the serum or tissue biopsy of a patient is useful for diagnosing ovarian cancer. The zins4 polypeptides modulate contractility in certain tissues, such as aortic rings, ileum and uterine. The polypeptide is also useful as modulator of blood pressure, muscle tension and osmotic balance. (IV) is useful for tagging cells that express zins4, isolating zins4 by affinity purification, for diagnostic assays for determining circulating levels of zins4 polypeptides, for detecting or quantitating soluble zins4 as marker of underlying pathology or disease, in analytical methods employing fluorescence activated cell sorting (FACS), for screening expression libraries, generating anti-idiotypic antibodies and as neutralizing antibodies or as antagonists to block zins4 activity in vitro and in vivo and in therapeutic and diagnostic purposes. (I) is useful in gene therapy, for detecting the expression of zins4 gene in a biological sample and as oligonucleotide probes for in vivo diagnosis. Zins4 probes and primers are also useful for detecting and localizing zins4 gene expression in tissue samples. Zins4 polypeptide and polynucleotides are further useful as educational tools in laboratory practicum kits for courses related to genetics and molecular biology, protein chemistry and antibody production and analysis.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
Draw Desc	Image								

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Term	Documents
ZINS4.DWPI,EPAB,JPAB,USPT,PGPB.	3
ZINS4S	0
ZINS4.USPT,PGPB,JPAB,EPAB,DWPI.	3
(ZINS4).USPT,PGPB,JPAB,EPAB,DWPI.	3

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WEST Search History

DATE: Thursday, August 08, 2002

<u>Set Name</u> side by side	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u> result set
<i>DB=USPT,PGPB,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ</i>			
L1	zins4	3	L1

END OF SEARCH HISTORY